

REMARKS

The specification is amended herein to claim priority for the present application as a continuation of U.S. Application Serial No. 09/352,332, filed July 13, 1999.

Claims 4-6, which were allowed in the parent application, are cancelled herein. Claims 2 and 3 are amended herein for improved expression, and new claims 7-9 are added to further protect the disclosed invention.

Claims 1-3 and 7-9 were previously considered in virtually the same form in the parent application and rejected by the Examiner in the Office Action mailed March 31, 2003. In that Action, claims 1 and 7 were rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsui et al. (JP404345338A), and claims 2-3 and 8-9 were rejected under 35 U.S.C. 103(a) as being obvious over Tsutsui et al. in view of Shirani et al. (U.S. Patent No. 5,617,418). The rejections are respectfully traversed.

In the present invention, a LAN comprises a line concentrator (that is, a HUB), and a plurality of terminals respectively connected with the line concentrator via corresponding cables, each cable including a power feed line that is part of the claimed power feeding system.

The power feeding system also includes a terminal detecting section (see, for example, telephone terminal detecting section 1, in application Figure 1), common to all terminals, and power control switching sections, one for each of the corresponding power feed lines. The terminal detecting section further comprises a power feed section, a link detecting section, a current monitoring section and power control section.

The plurality of LAN terminals includes at least one terminal that receives power from the power feeding system, which is, for example, a telephone terminal.

With respect the LAN terminals connected to the HUB, the control section causes the power control switching sections to connect the power feed section to each of the corresponding power feed lines in sequence, and the current monitoring section then detects whether the respective terminal is one that is to receive power from the power

feeding system, based on a preset current value range. If the detected current is within the range, the power feeding system further continues feeding power to the terminal, and if it is not, the power feeding system stops feeding power to the terminal.

The Tsutsui reference discloses an overcurrent prevention device for use with an individual piece of LAN terminal equipment. There is no disclosure, or even suggestion, in Tsutsui of a plurality of power feed control switching sections for sequentially connecting a common power feed section to a plurality of power feed lines, as required by claims 1 and 7.

Moreover, the device in Tsutsui is only used for preventing overcurrent. There is no disclosure, or even suggestion, of a current monitoring section for detecting whether the value of current flowing in each of the power feed lines when that power feed line is connected to the power feed section is within a preset current value range that indicates that a terminal for receiving power is connected to the cable which includes the corresponding power feed line, as claims 1 and 7 require. In other words, the apparent purpose of the device in Tsutsui is to protect the LAN terminal or the power feed section, or both, from potential damage due to overcurrent, and not to determine whether the LAN terminal being monitored is a telephone or other device requiring current from the power feeding system.

With respect to claims 2-3 and 8-9, the Examiner acknowledges Tsutsui that fails to teach a link detecting section for monitoring each of the signal lines to detect whether the linkage with respect to the LAN, of the terminal connected to the corresponding signal line, is established. To overcome this deficiency in the disclosure of Tsutsui, the Examiner points to Shirani as teaching a link detecting section for monitoring each of the signal lines to detect whether linkage with respect to the LAN, of the terminal connected to corresponding signal line, is established. The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shirani in the teachings of Tsutsui in

order to allow a network to be configured in a mixed protocol or a mixed environment, with, for example, a single hub connected to a plurality of nodes which operate according to different protocols, with the configuration being achieved automatically, without the need for manually establishing a predetermined protocol beforehand for each node.


The applicant respectfully disagrees. Claims 2-3 and 8-9 require that the control section cause the corresponding power feed control switching section to continue feeding power to the corresponding power feed line when the link detecting section detects that the linkage with respect to the LAN of the terminal connected to the corresponding signal line, is established, while the value of the current flowing in the corresponding power feed line is detected to be within said preset current value range, and further that, the control section cause the corresponding power feed control switching section to continue to stop feeding power to the corresponding power feed line when the link detecting section detects that the linkage with respect to the LAN of the terminal connected to the corresponding signal line, is established, while the corresponding power feed line is disconnected from the power feed section by the corresponding power feed control switching section. Shirani fails to teach or suggest any relationship at all between the link detection function and the control of power fed to various LAN terminal devices. As the Examiner emphasizes, the purpose of link detection in Shirani is to allow a network to be configured for mixed protocols, with the configuration being achieved automatically, without the need for manually establishing a predetermined protocol beforehand for each node. There is nothing in the references taken as a whole to suggest the functionality of the invention recited in claims 2-3 and 8-9.

For at least the foregoing reasons, it is respectfully submitted that claims 1-3 and 7-9 distinguish over the previously applied Tsutsui and Shirani references, whether considered individually or in combination.

Entry of this Preliminary Amendment and examination of claims 1-3 and 7-9 is respectfully requested.

Respectfully submitted,

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Date


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